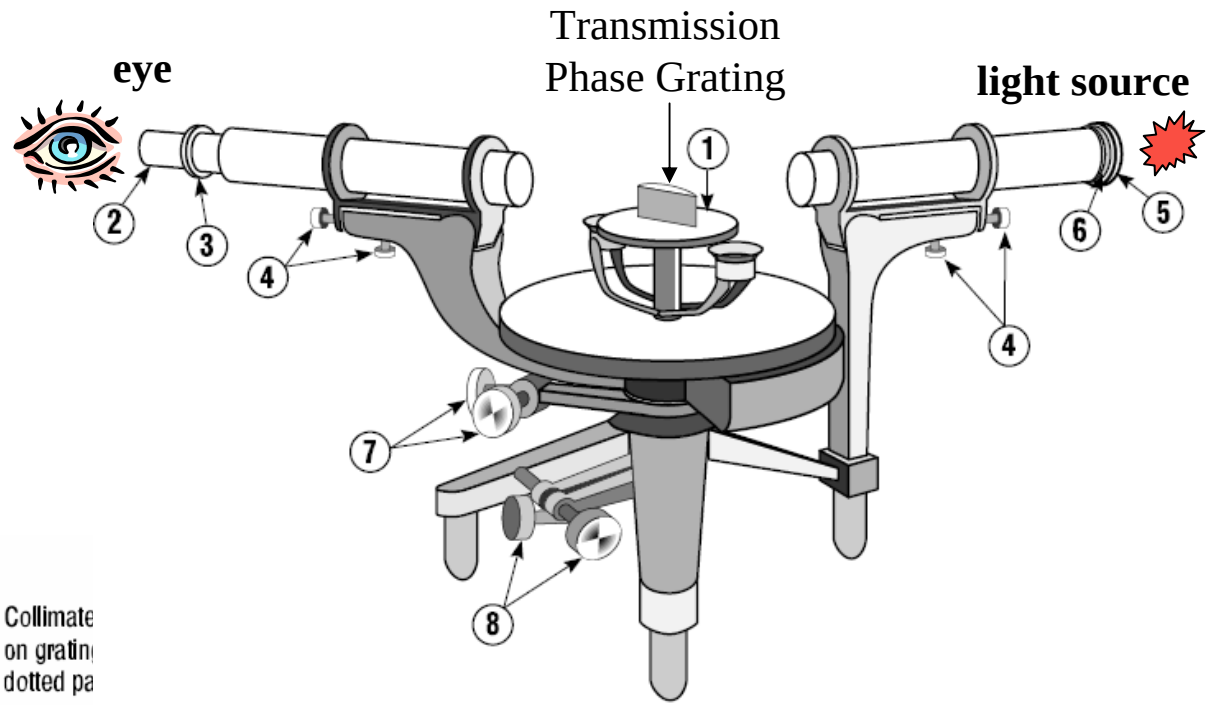
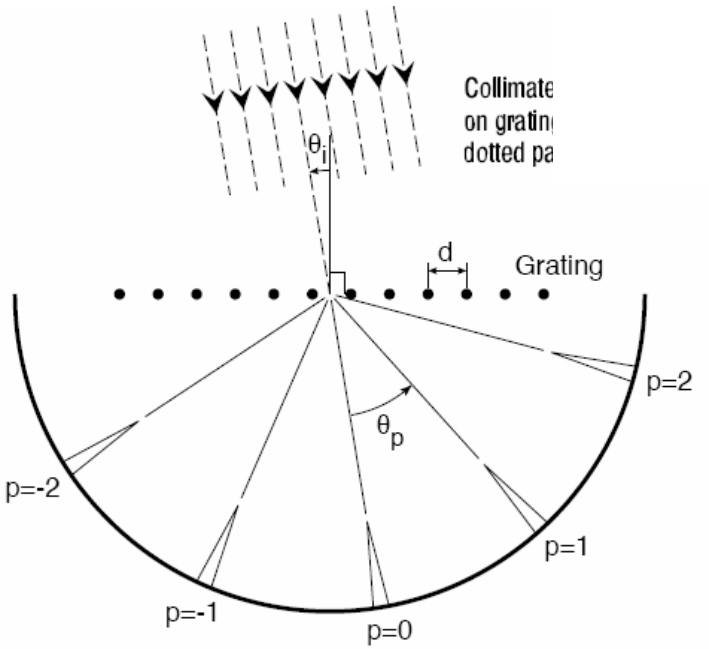
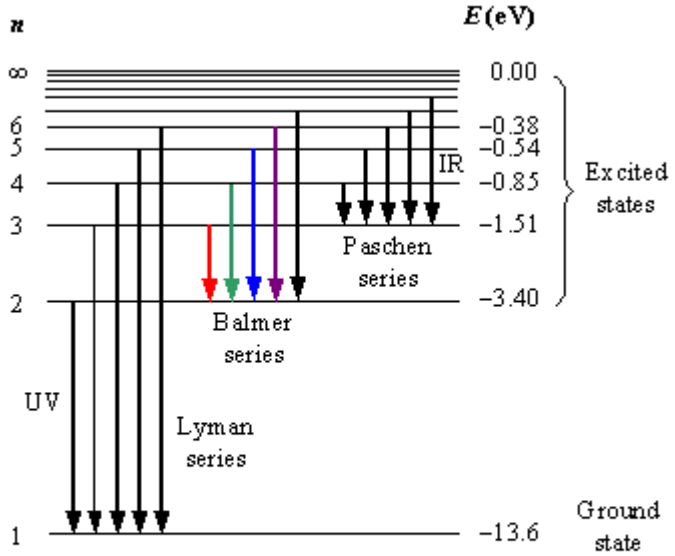


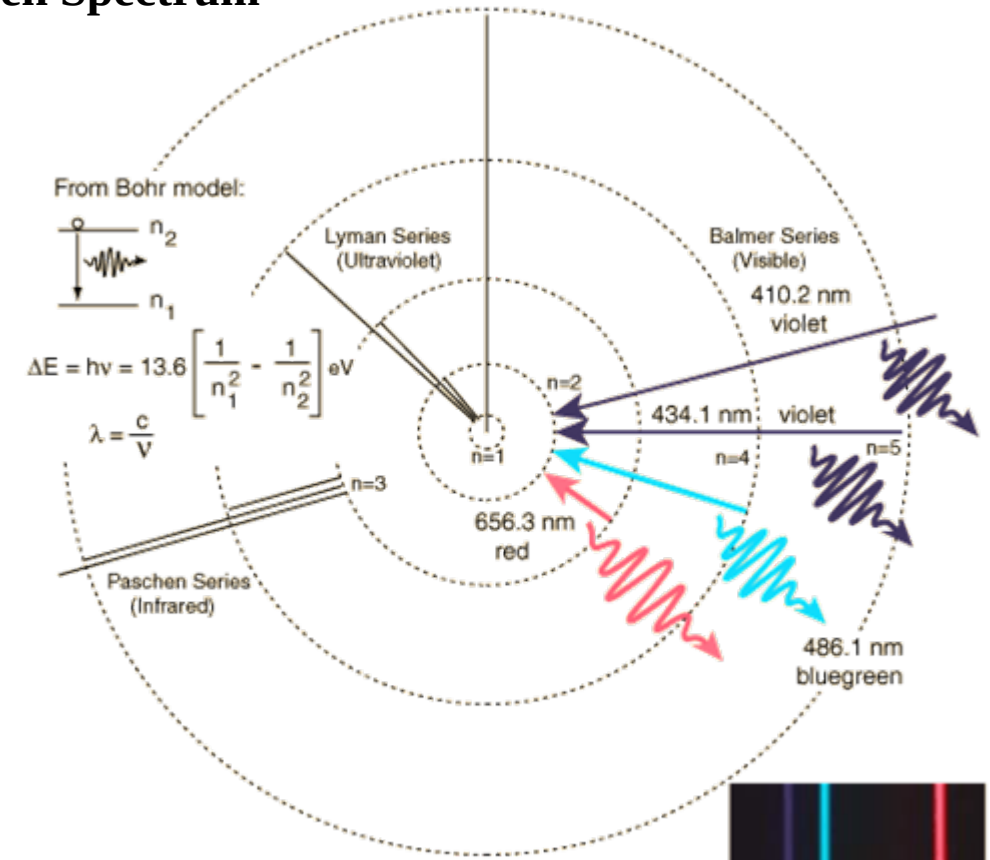


$$p\lambda = d\left(\sin\theta_p + \sin\theta_i\right), \qquad p = \pm 1, \pm 2, \pm 3, \ldots$$

Hydrogen Spectrum

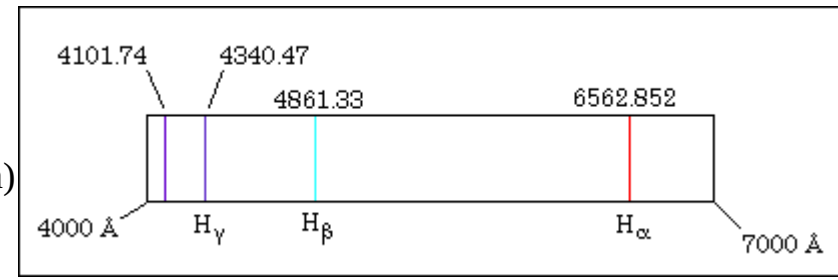


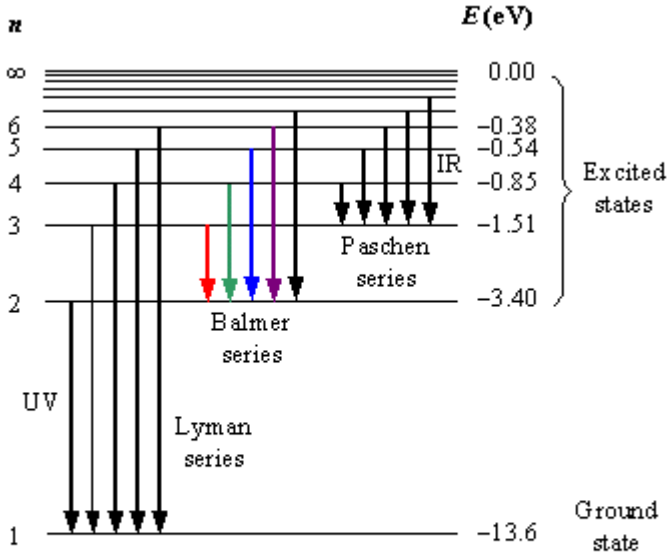
Energy levels of the hydrogen atom with some of the transitions between them that give rise to the spectral lines indicated.



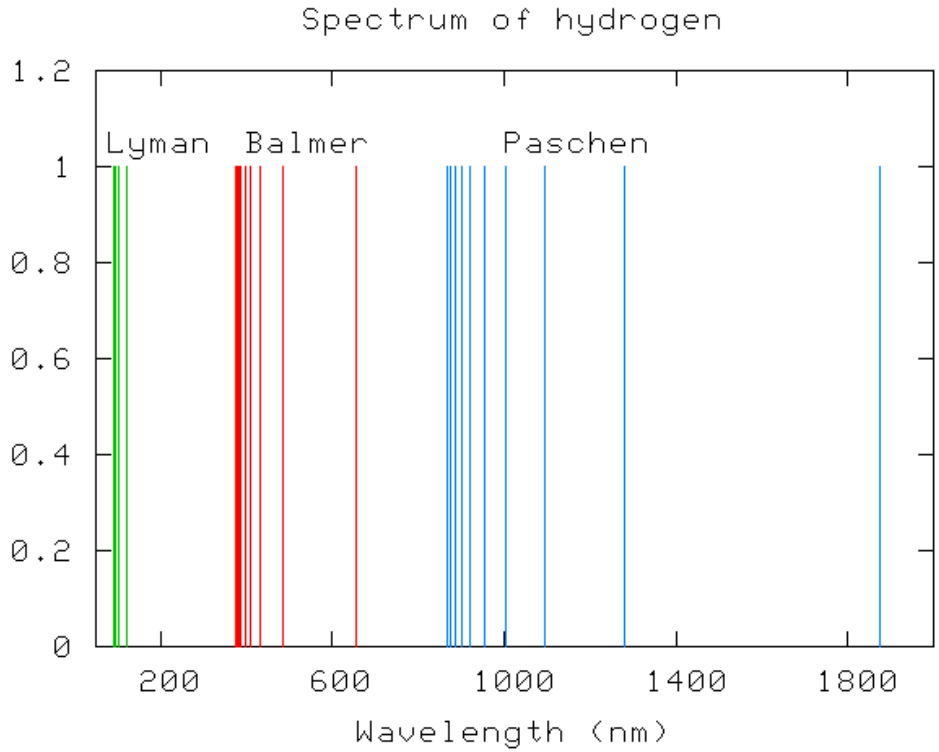
The measured lines of the Balmer series of hydrogen in the nominal visible region are:

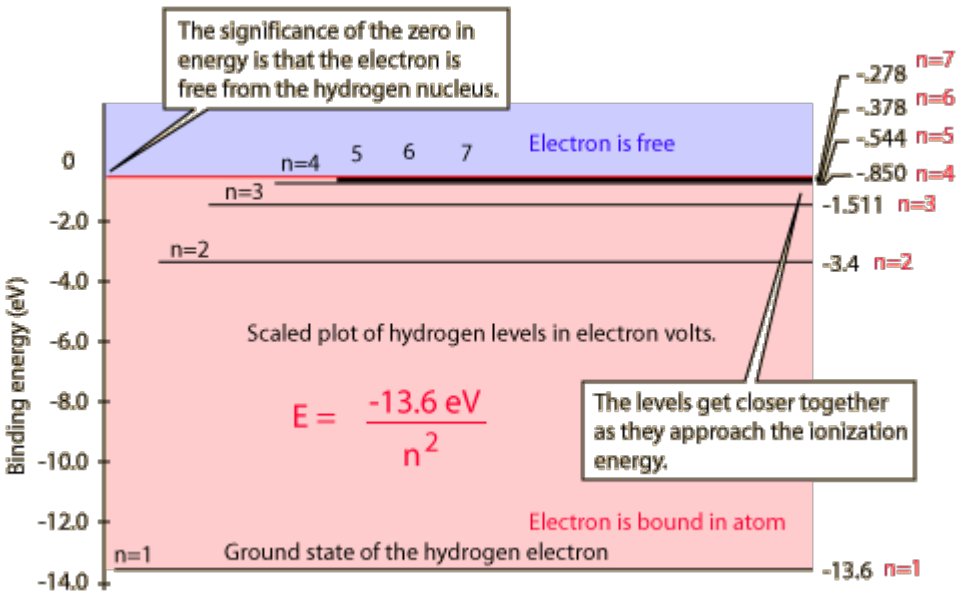
Wavelength (nm)	Relative Intensity	Transition	Color
383.5384	5	9 -> 2	Violet
388.9049	6	8 -> 2	Violet
397.0072	8	7 -> 2	Violet
410.174	15	6 -> 2	Violet
434.047	30	5 -> 2	Violet
486.133	80	4 -> 2	Bluegreen (cyan)
656.272	120	3 -> 2	Red
656.2852	180	3 -> 2	Red



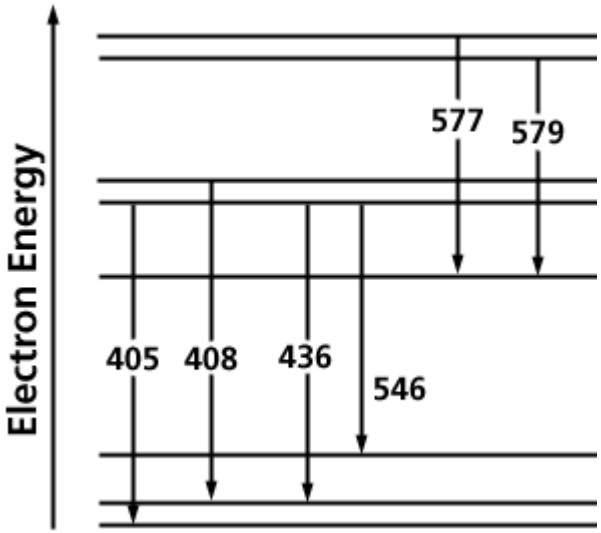


Energy levels of the hydrogen atom with some of the transitions between them that give rise to the spectral lines indicated.





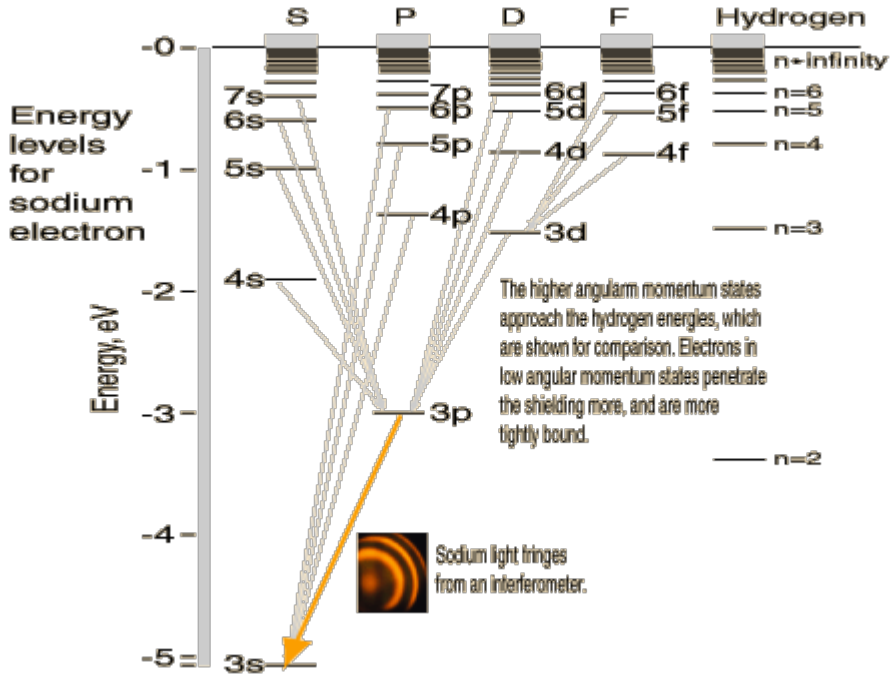
Mercury



The measured lines of Mercury in the nominal visible region are:

Wavelength (nm)	Relative Intensity	Color
614.95	weak	Red
579.07	strong	Yellow
576.96	strong	Yellow
546.07	strong	Green
435.84	very strong	Blue
434.75	strong	
433.92	medium	
407.78	strong	Violet
404.66	very strong	

Sodium



Sodium Doublet